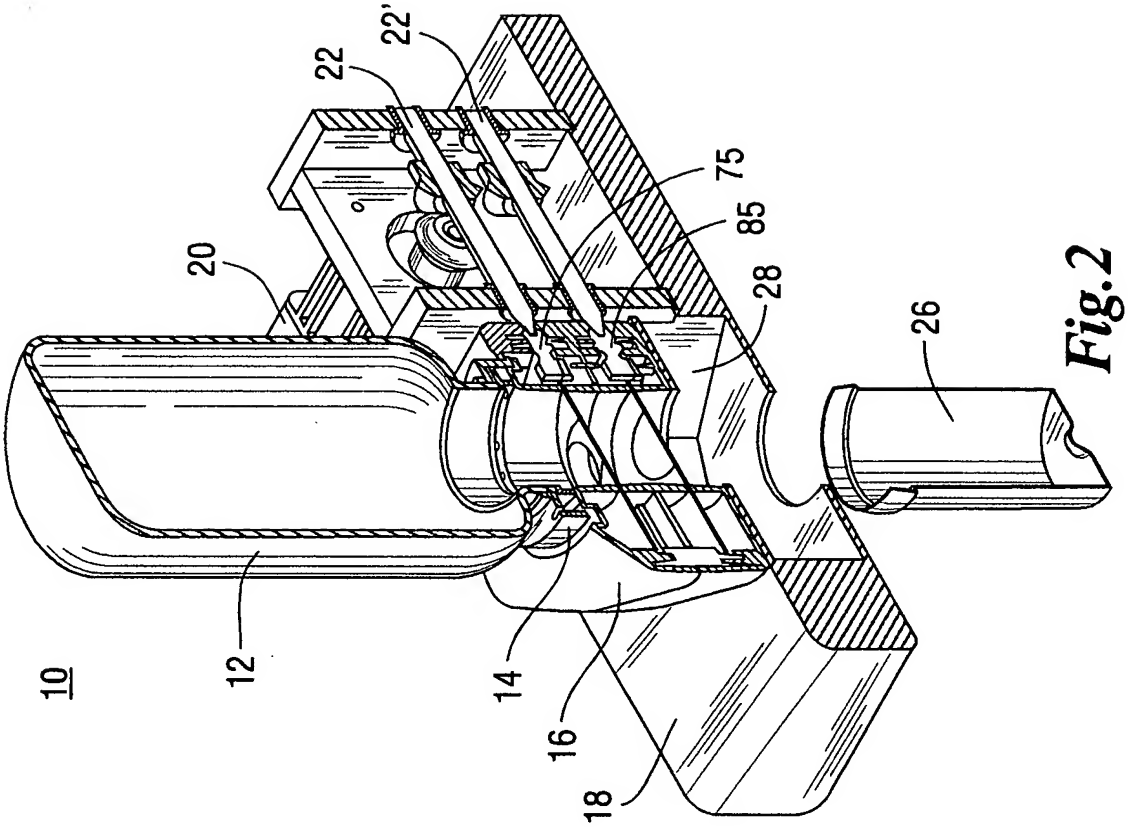


Fig.2

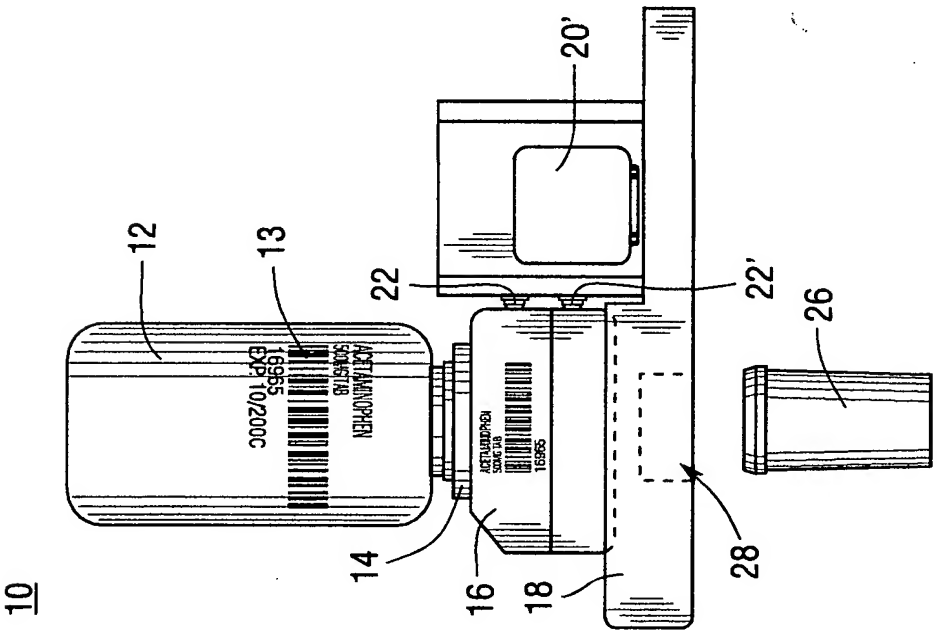


Fig.1

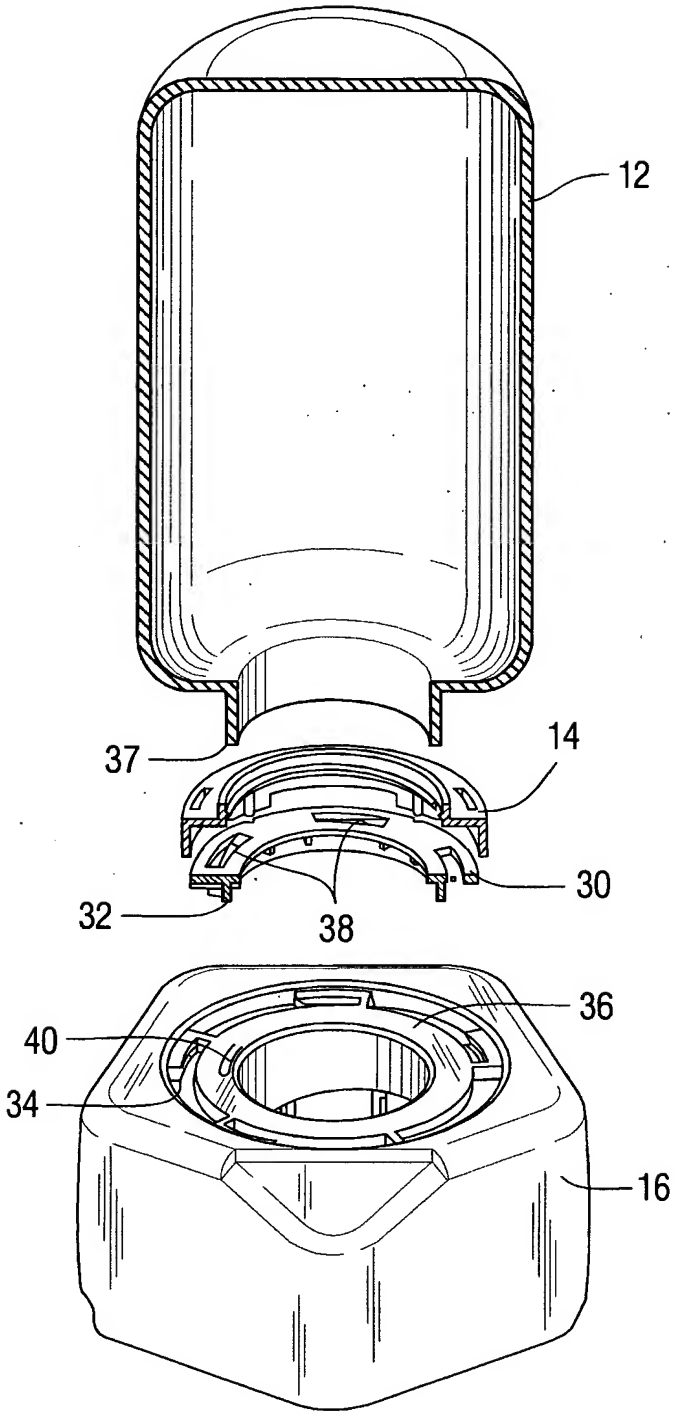


Fig.3

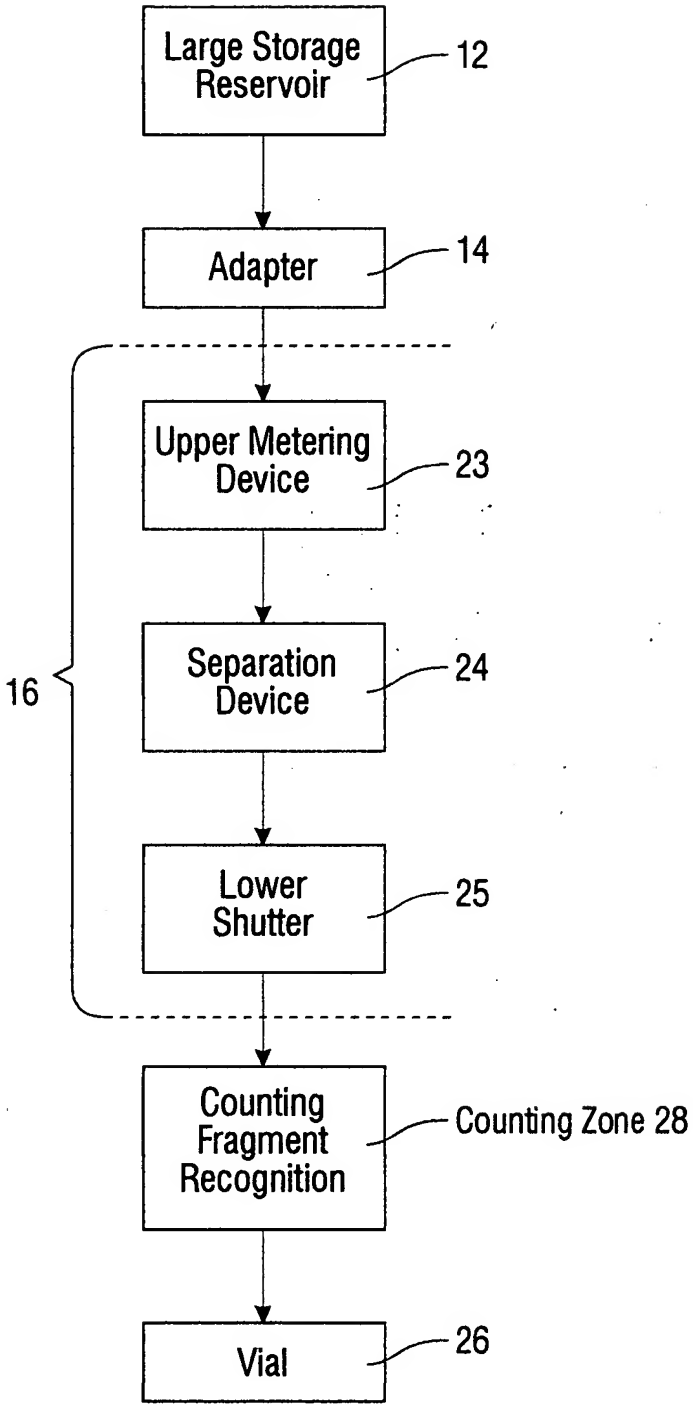

Large Storage Reservoir
12
Adapter
14
Upper Metering Device
23
Separation Device
24
16
Lower Shutter
25
Counting Fragment Recognition
Counting Zone 28
Vial
26

Fig.4

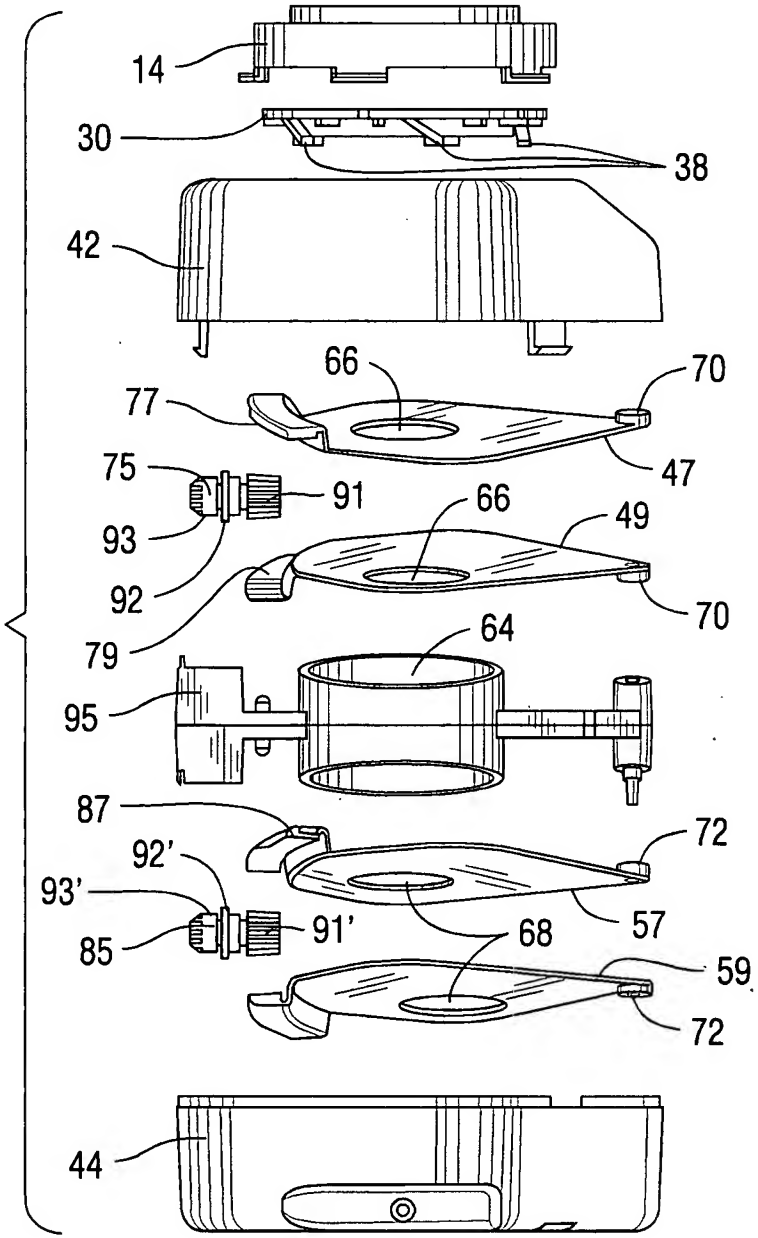


Fig.5

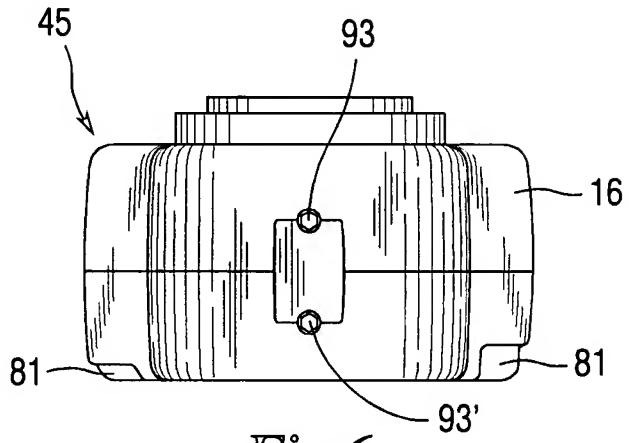


Fig.6

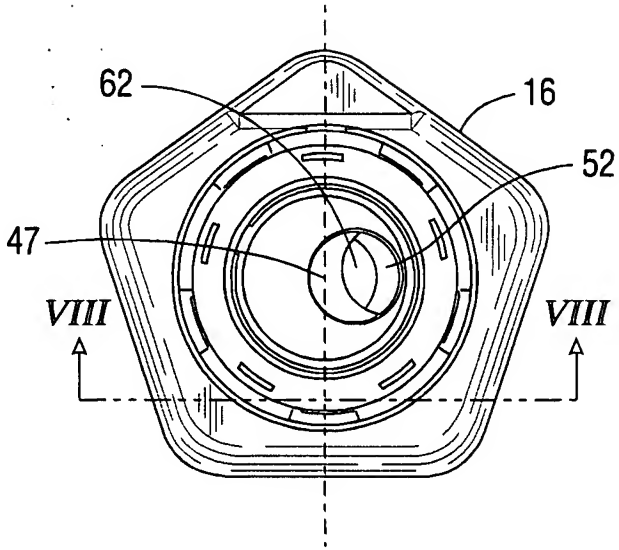


Fig.7

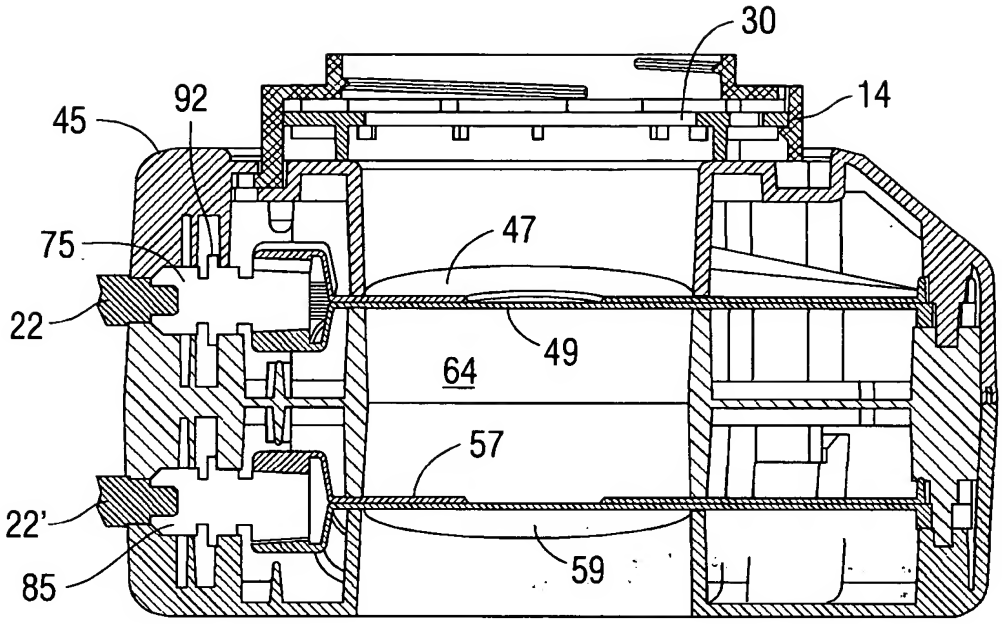


Fig.8

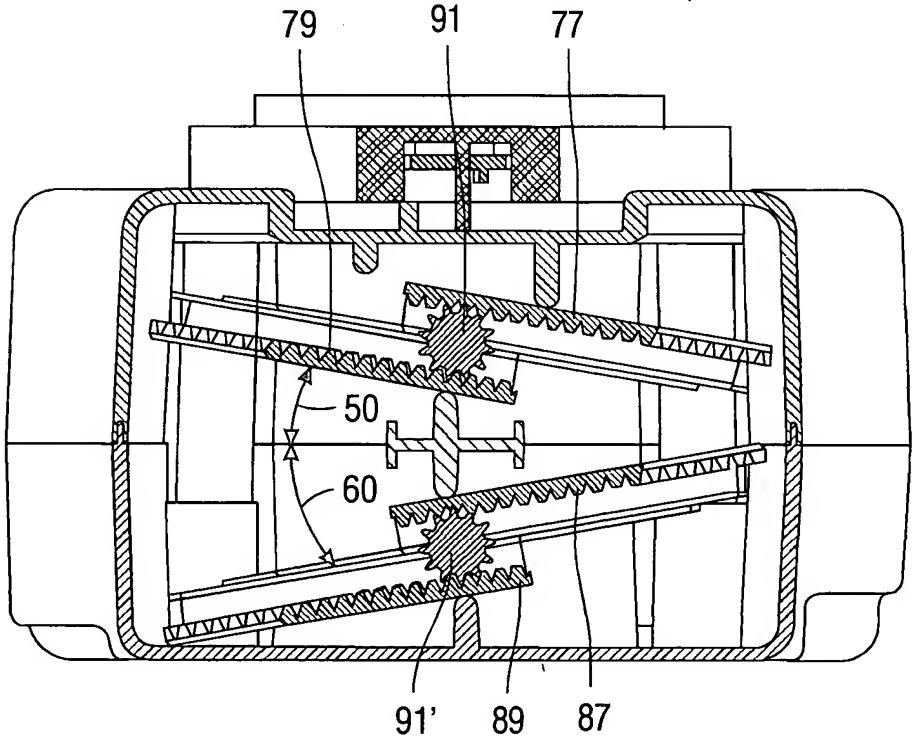


Fig.9

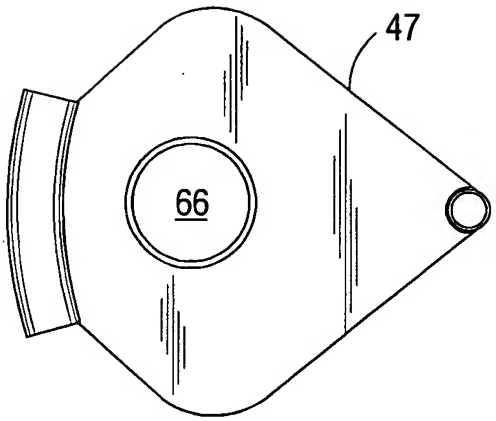


Fig.10A

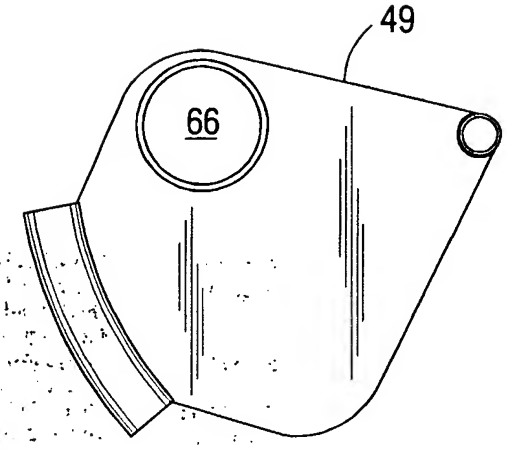


Fig.10B

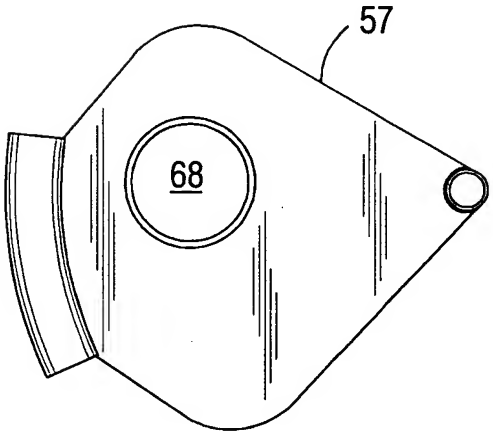


Fig.10C

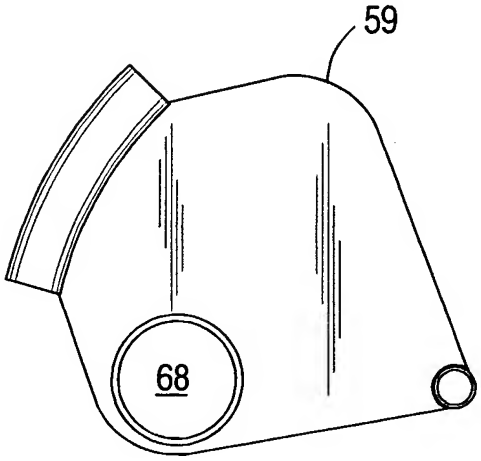


Fig.10D

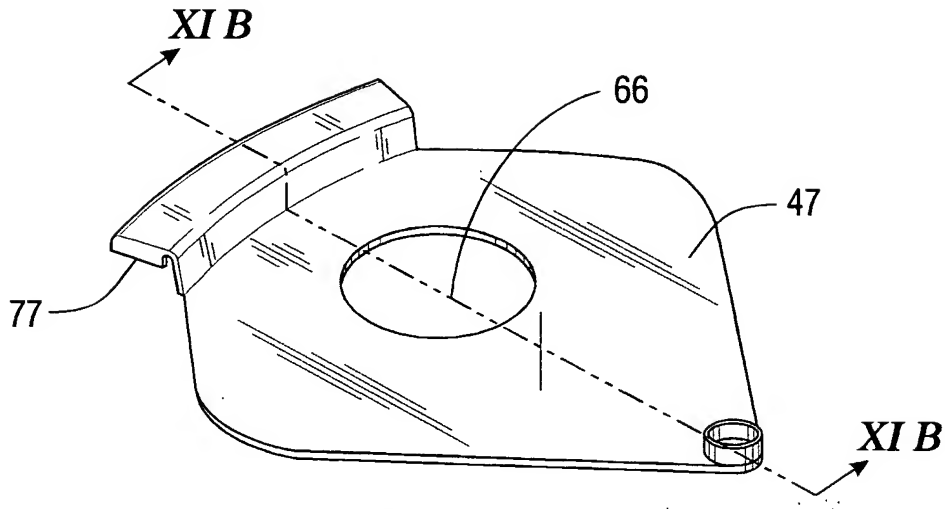


Fig.11A

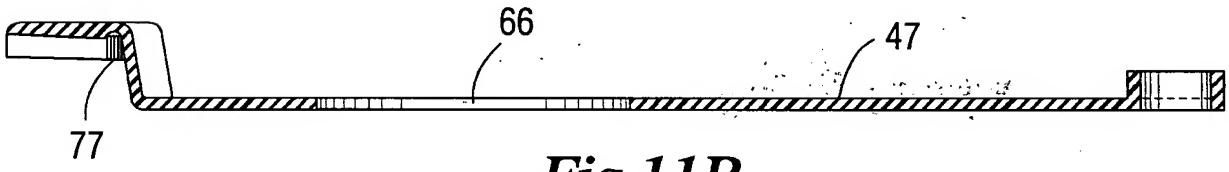


Fig.11B

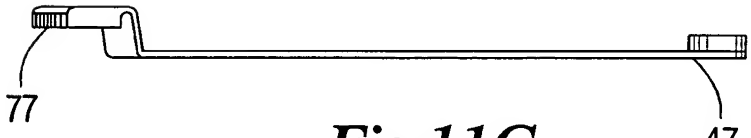


Fig.11C

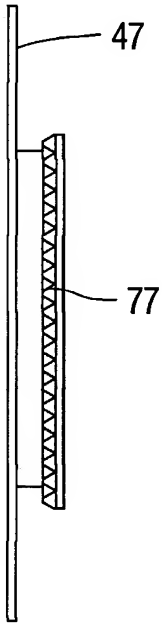


Fig.11D

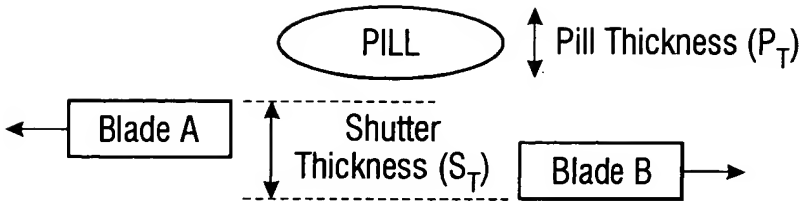


Fig.12A

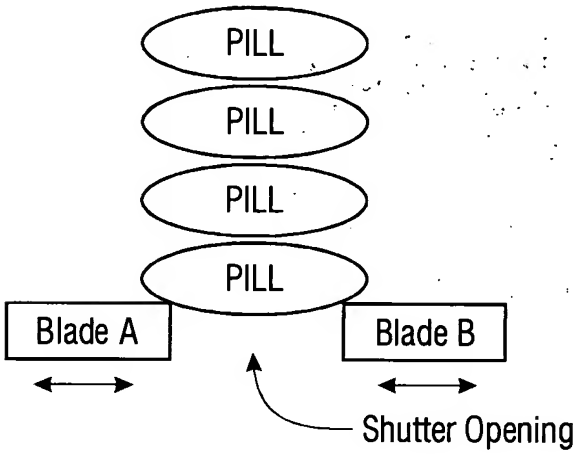


Fig.12B

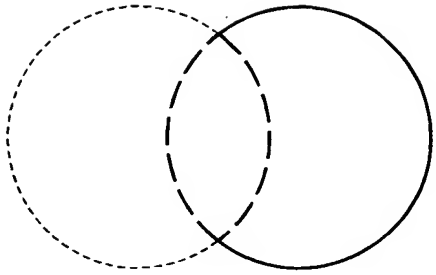


Fig.13A

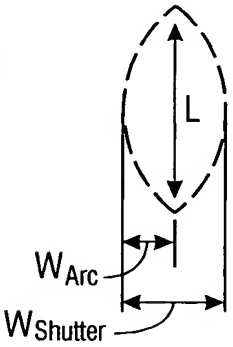


Fig.13B

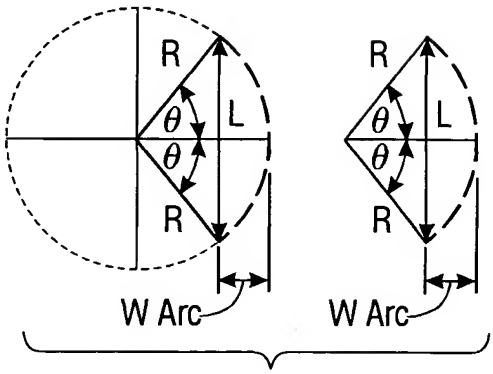


Fig.13C

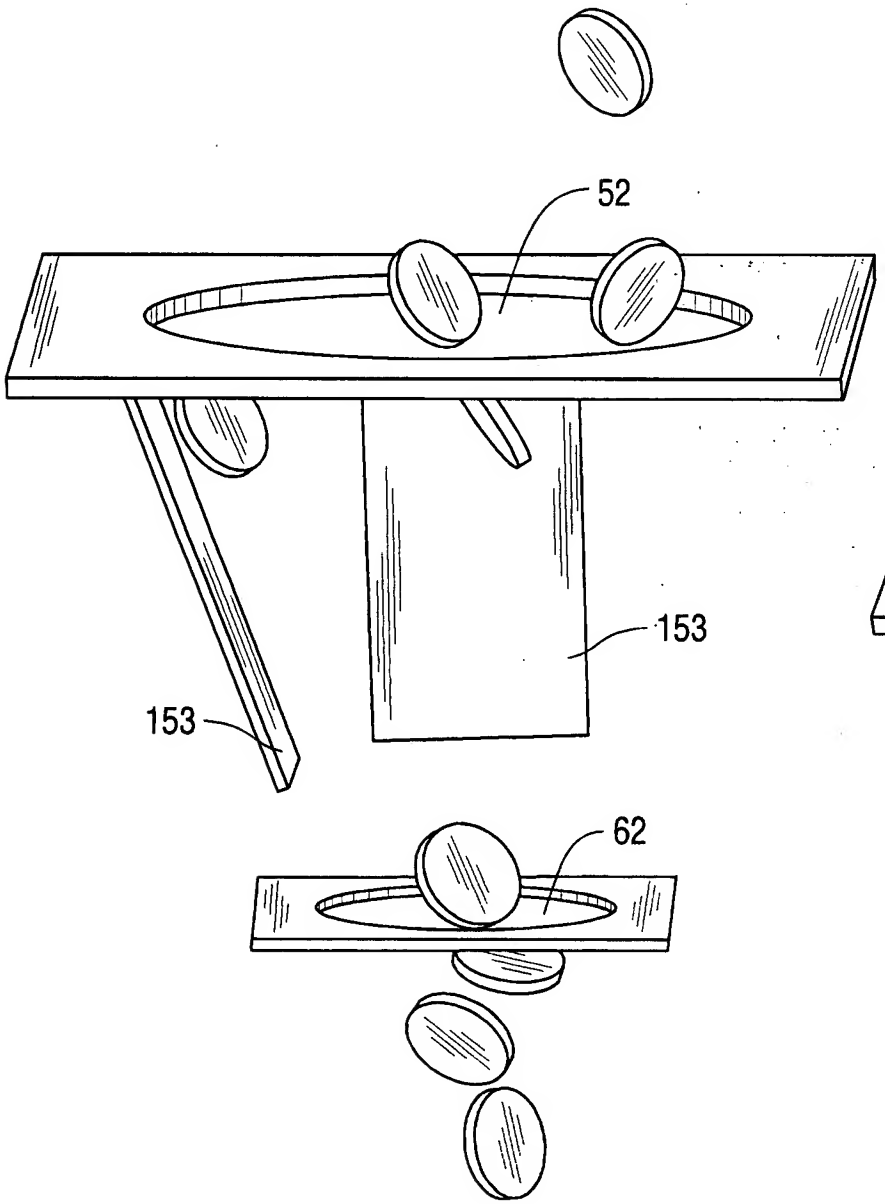


Fig.14A

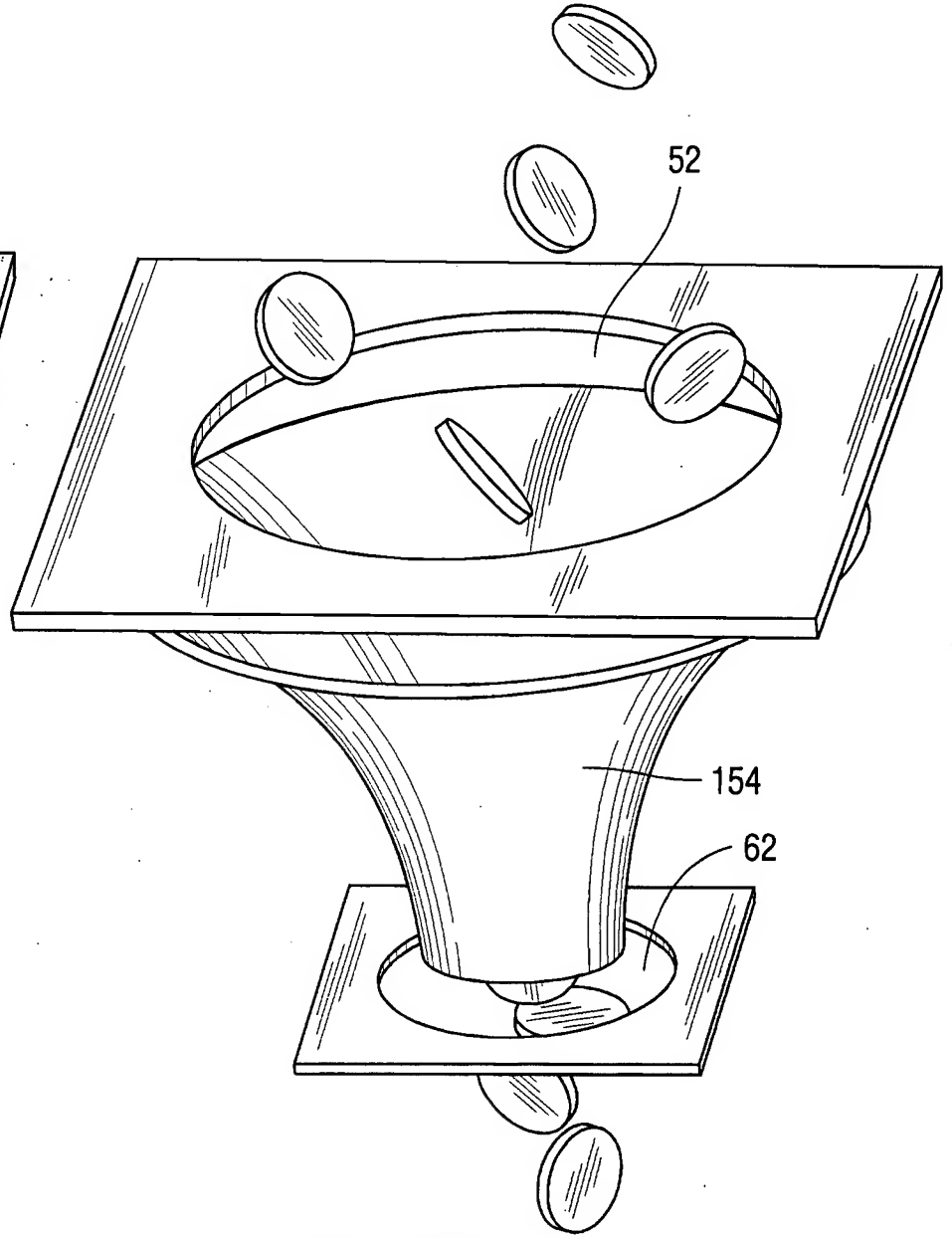


Fig.14B

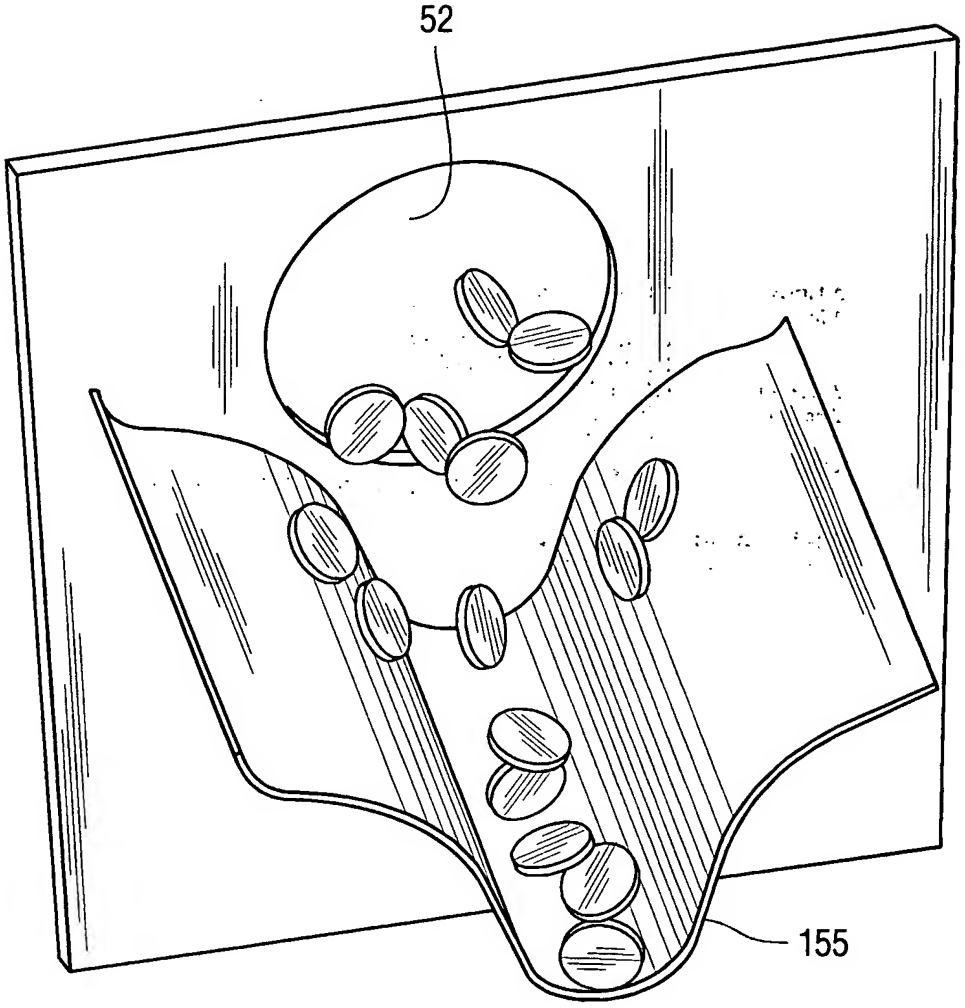


Fig.14C

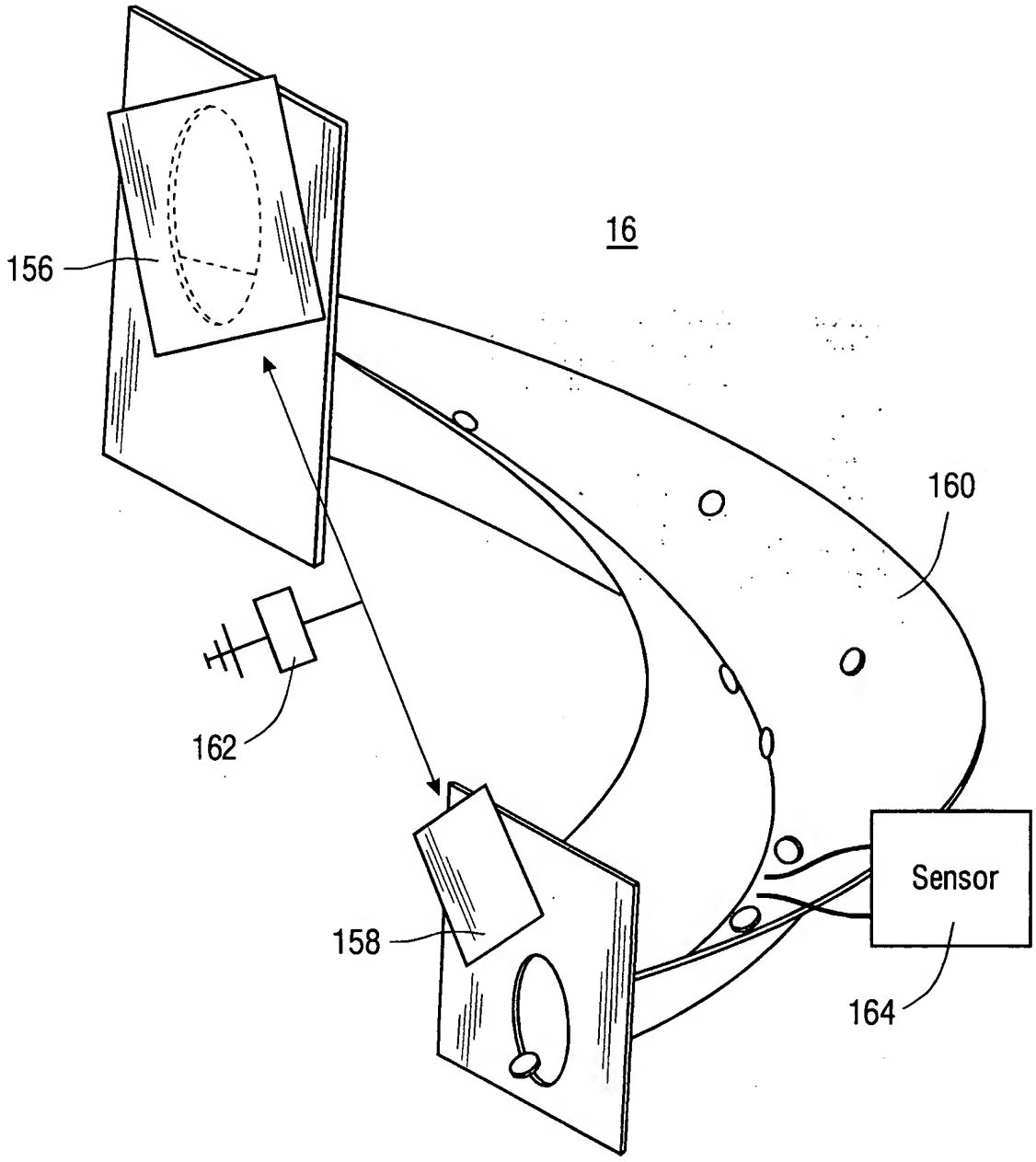


Fig.15

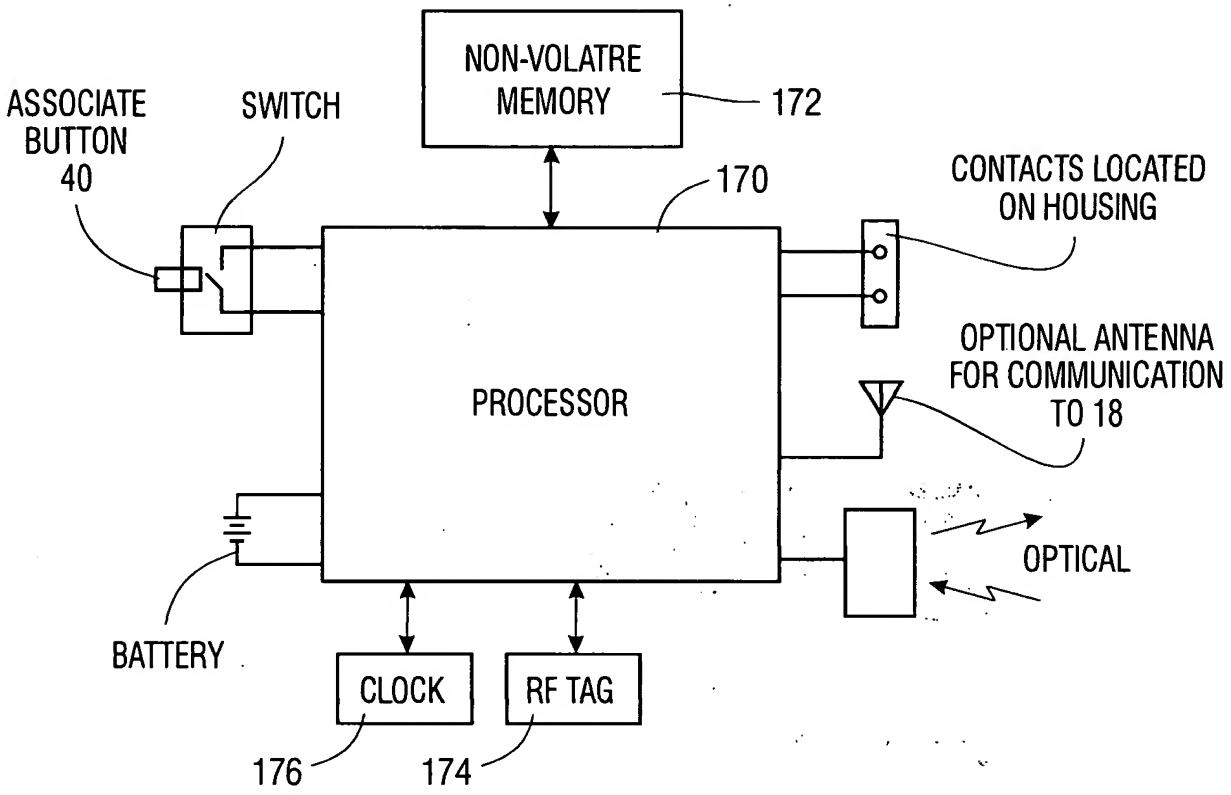

NON-VOLATRE MEMORY
172
ASSOCIATE BUTTON 40
SWITCH
170
CONTACTS LOCATED ON HOUSING
PROCESSOR
OPTIONAL ANTENNA FOR COMMUNICATION TO 18
OPTICAL
BATTERY
CLOCK
RF TAG
176
174

Fig.16

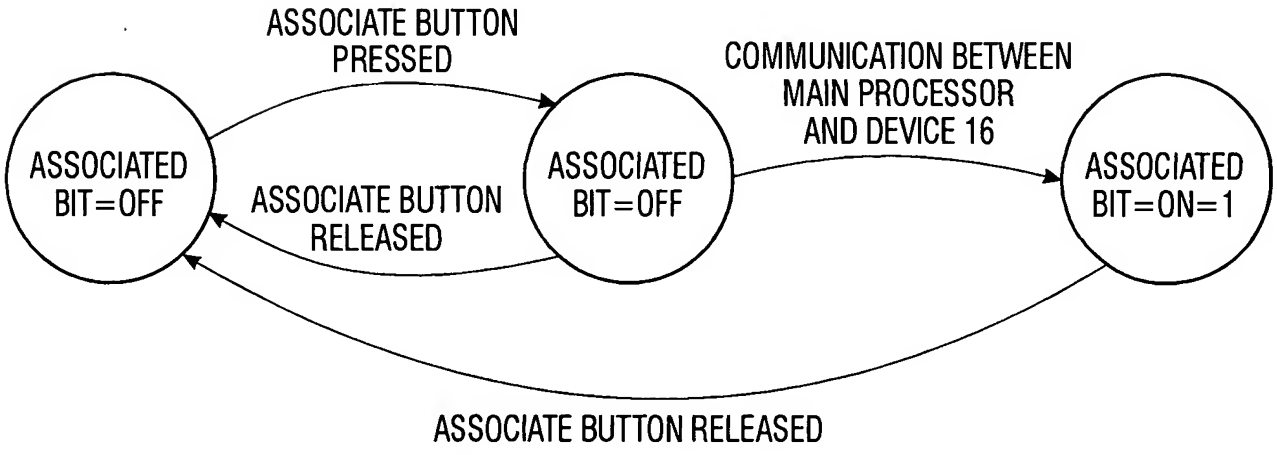

ASSOCIATE BUTTON PRESSED
COMMUNICATION BETWEEN MAIN PROCESSOR AND DEVICE 16
ASSOCIATED BIT=OFF
ASSOCIATE BUTTON RELEASED
ASSOCIATED BIT=OFF
ASSOCIATED BIT=ON=1
ASSOCIATE BUTTON RELEASED

Fig.17

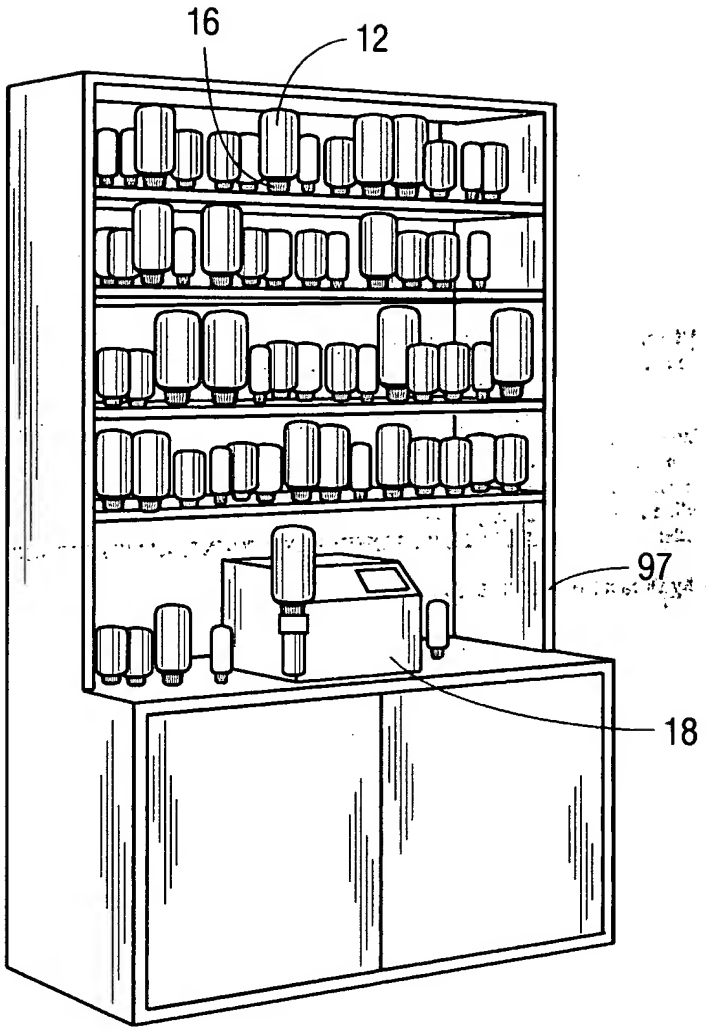


Fig.18

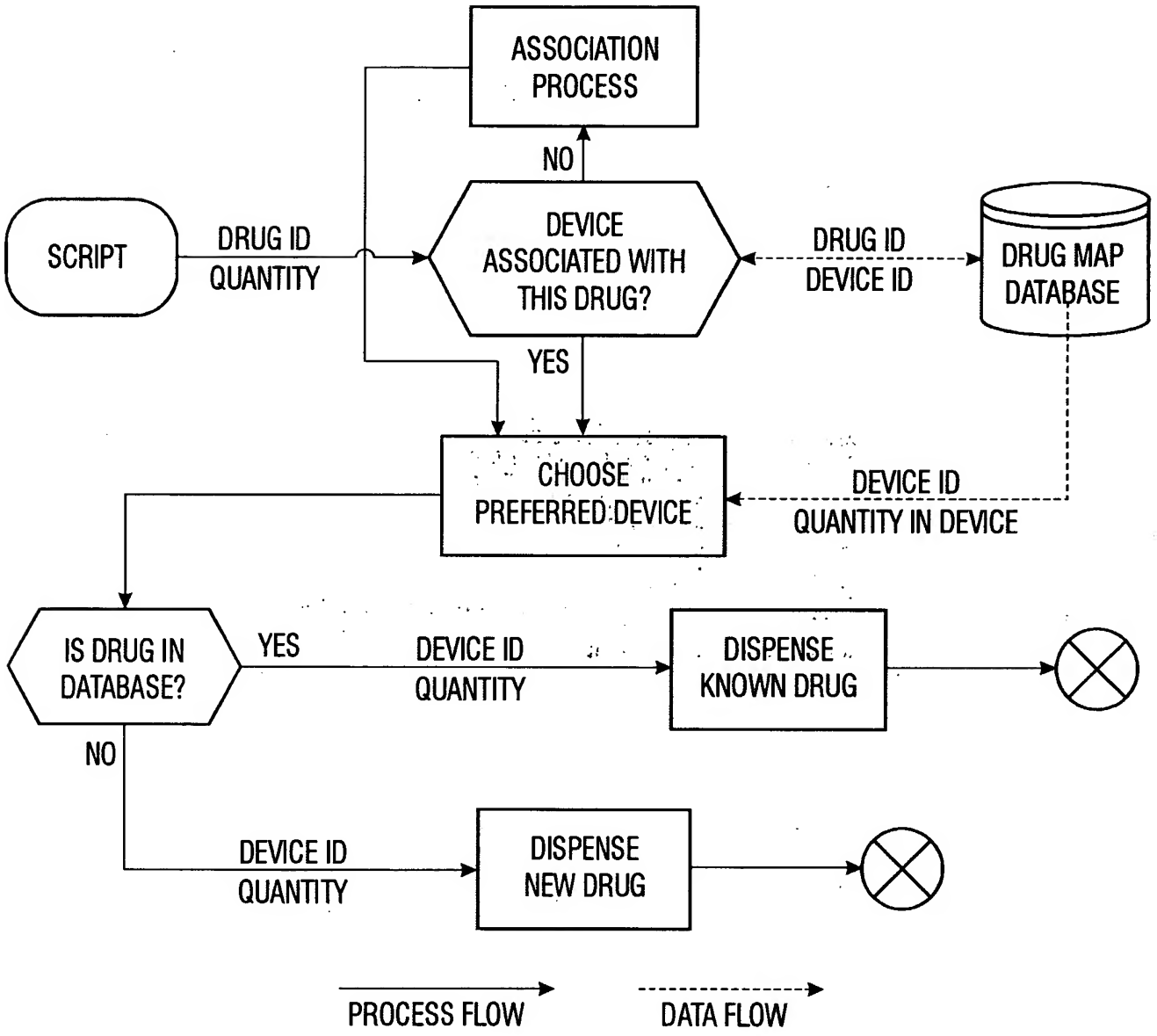


Fig.18A

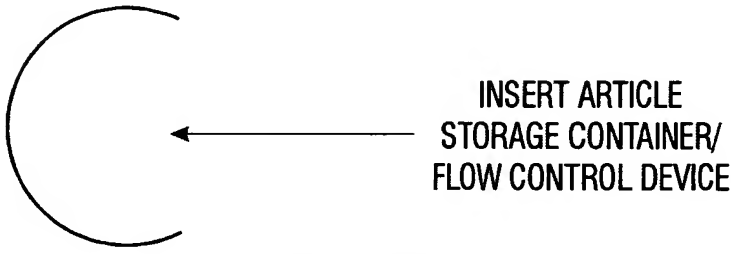


Fig.19

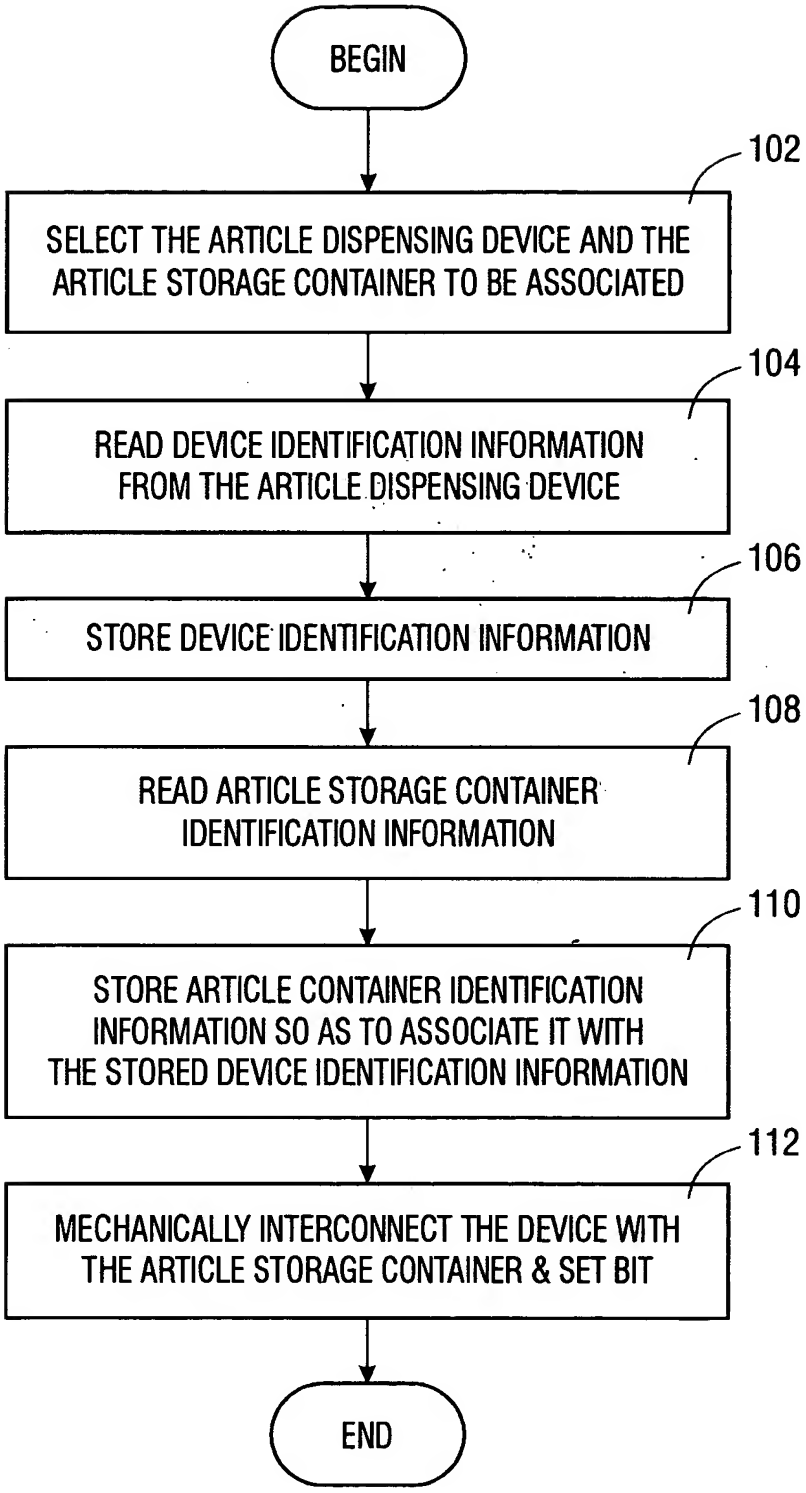

BEGIN
102
SELECT THE ARTICLE DISPENSING DEVICE AND THE ARTICLE STORAGE CONTAINER TO BE ASSOCIATED
104
READ DEVICE IDENTIFICATION INFORMATION FROM THE ARTICLE DISPENSING DEVICE
106
STORE DEVICE IDENTIFICATION INFORMATION
108
READ ARTICLE STORAGE CONTAINER IDENTIFICATION INFORMATION
110
STORE ARTICLE CONTAINER IDENTIFICATION INFORMATION SO AS TO ASSOCIATE IT WITH THE STORED DEVICE IDENTIFICATION INFORMATION
112
MECHANICALLY INTERCONNECT THE DEVICE WITH THE ARTICLE STORAGE CONTAINER & SET BIT
END

Fig.20

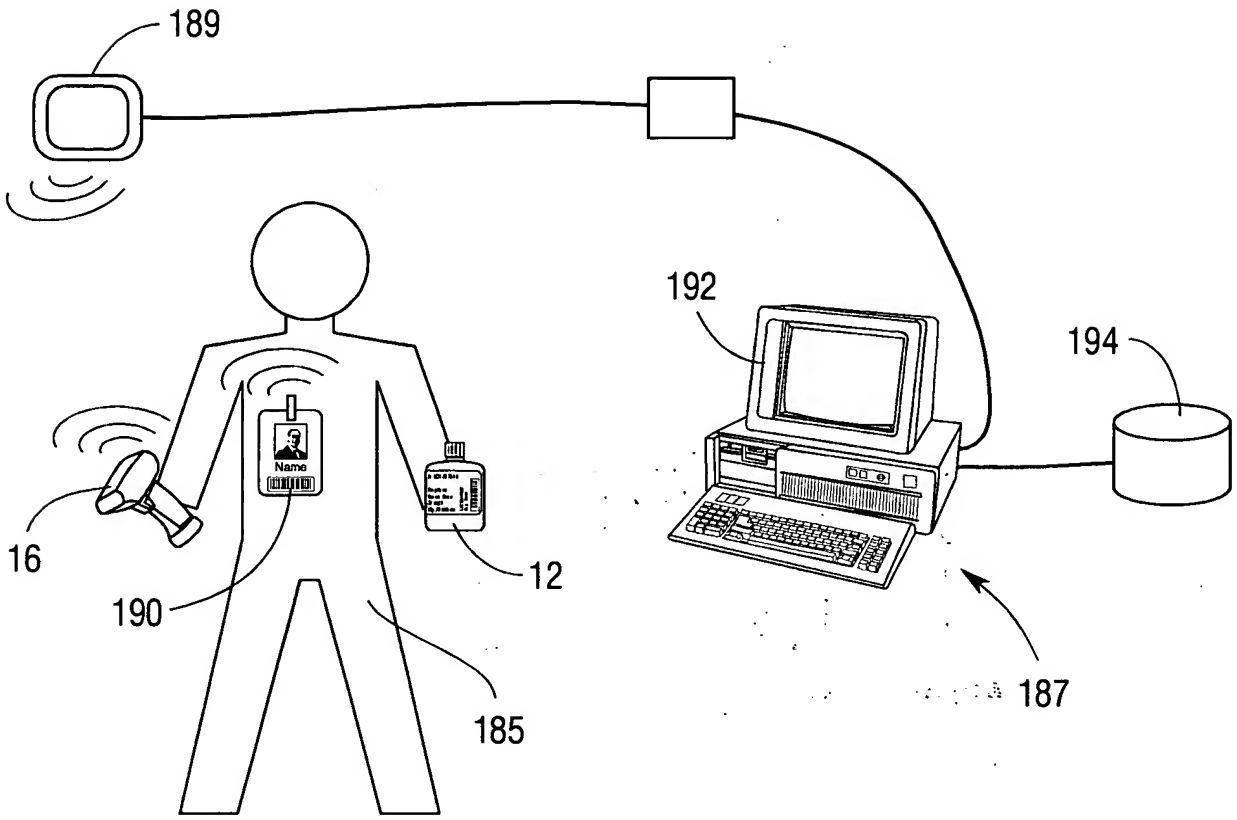


Fig.21

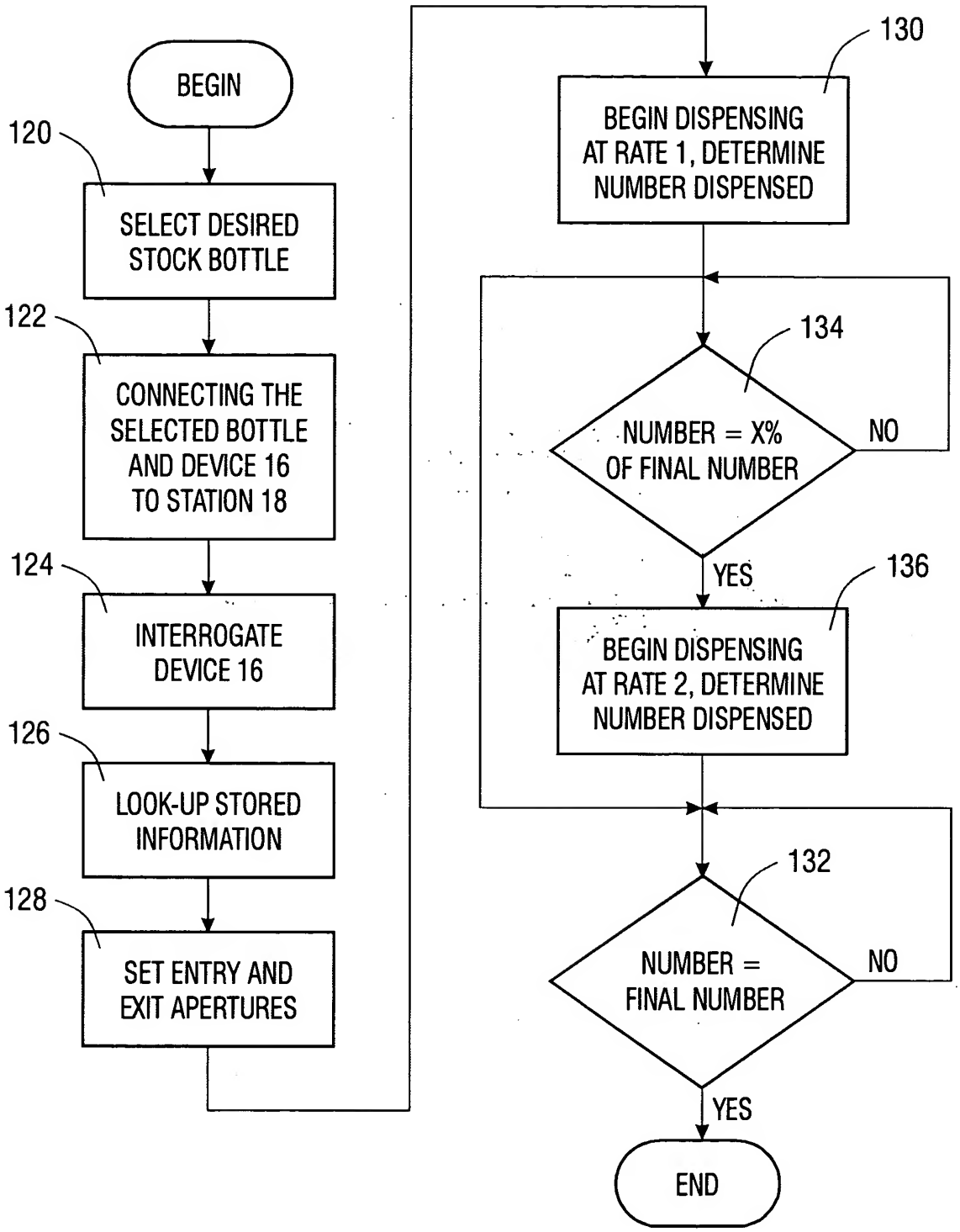

BEGIN
120
SELECT DESIRED STOCK BOTTLE
122
CONNECTING THE SELECTED BOTTLE AND DEVICE 16 TO STATION 18
124
INTERROGATE DEVICE 16
126
LOOK-UP STORED INFORMATION
128
SET ENTRY AND EXIT APERTURES
130
BEGIN DISPENSING AT RATE 1, DETERMINE NUMBER DISPENSED
134
NUMBER = X% OF FINAL NUMBER
NO
YES
136
BEGIN DISPENSING AT RATE 2, DETERMINE NUMBER DISPENSED
132
NUMBER = FINAL NUMBER
NO
YES
END

Fig.22

Fig.23A

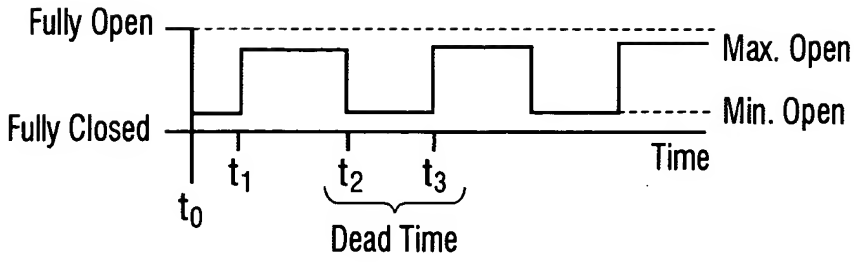
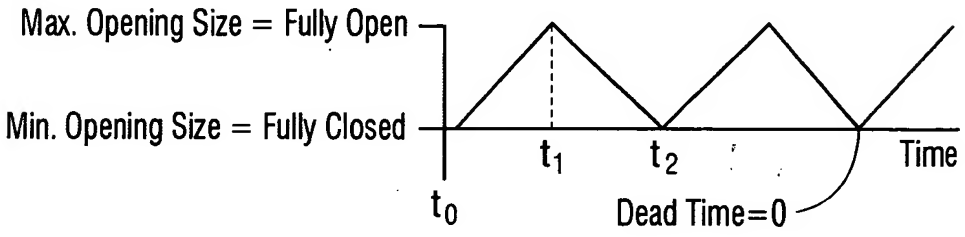


Fig.23B



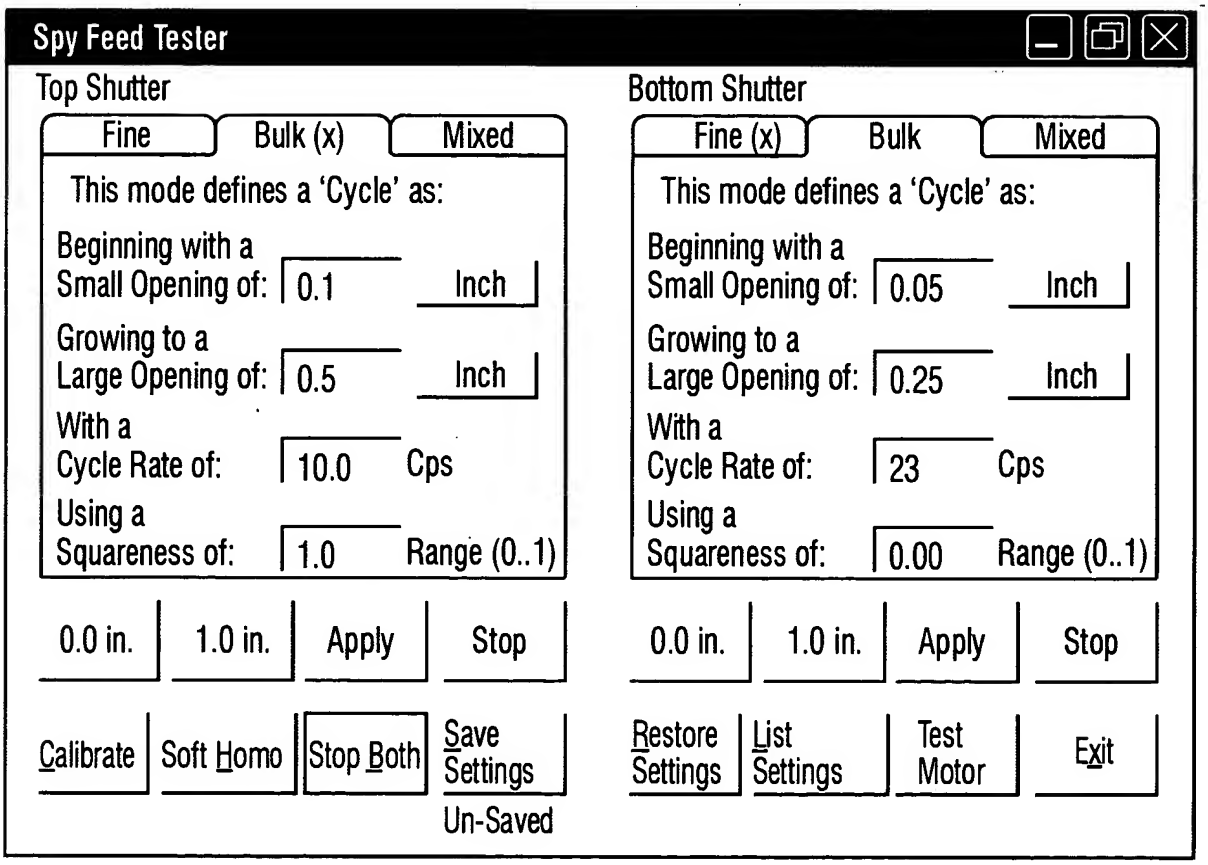


Fig.24

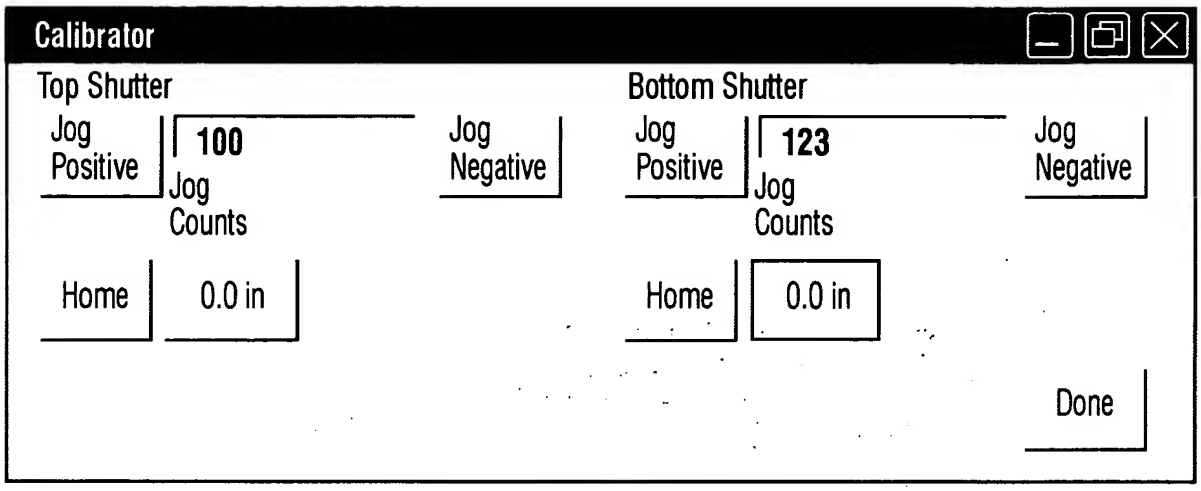

Calibrator
Top Shutter
Jog Positive
100
Jog Counts
Jog Negative
Home
0.0 in
Bottom Shutter
Jog Positive
123
Jog Counts
Jog Negative
Home
0.0 in
Done

Fig.25

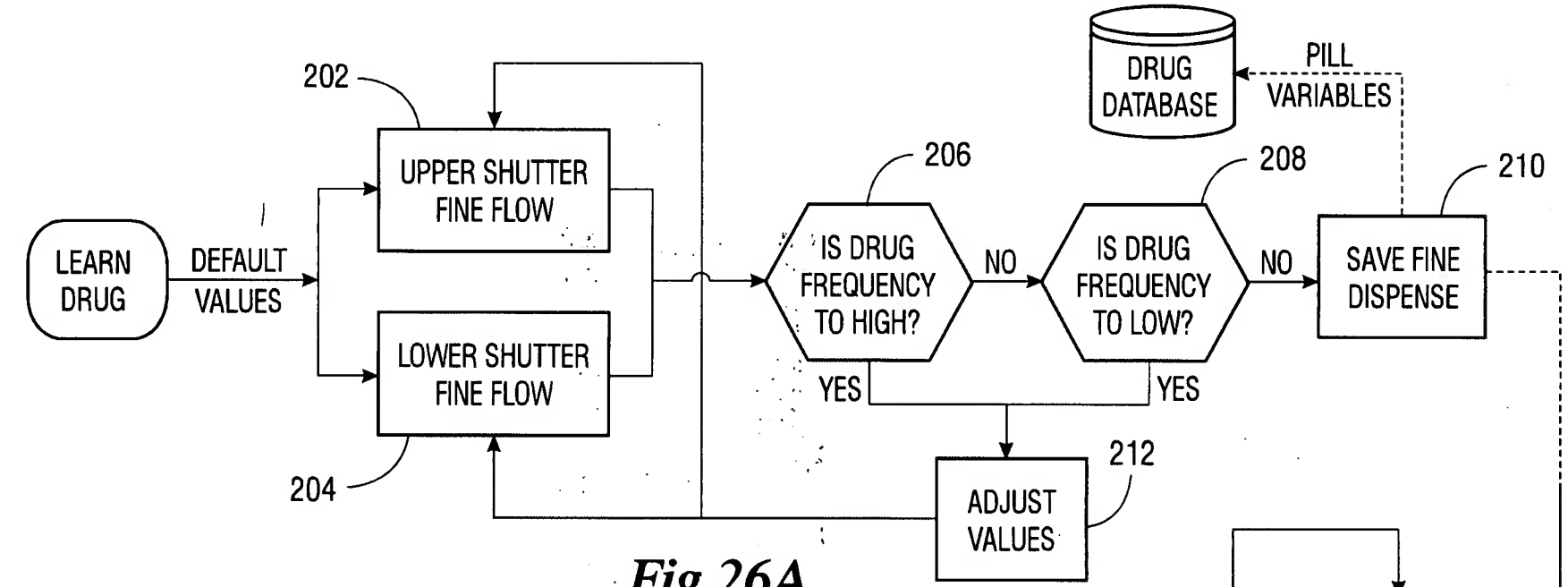


Fig.26A

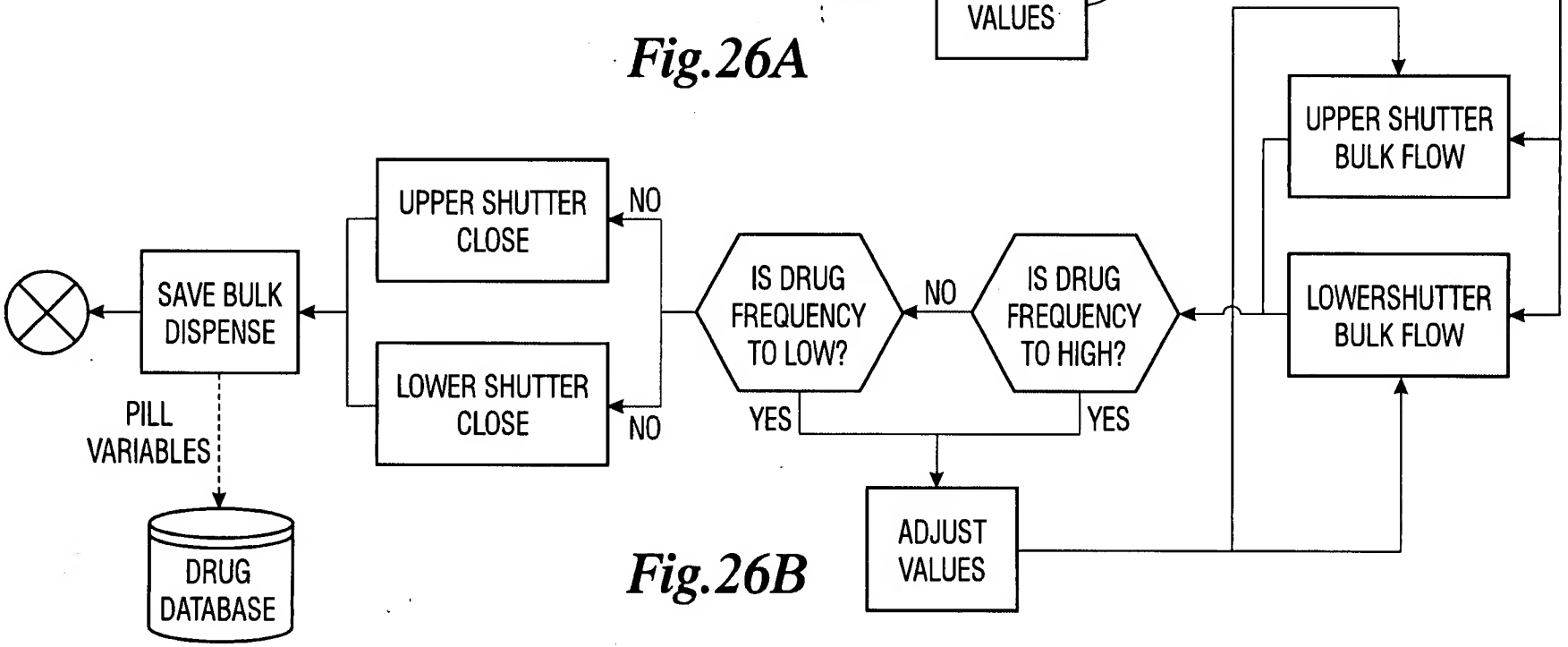


Fig.26B

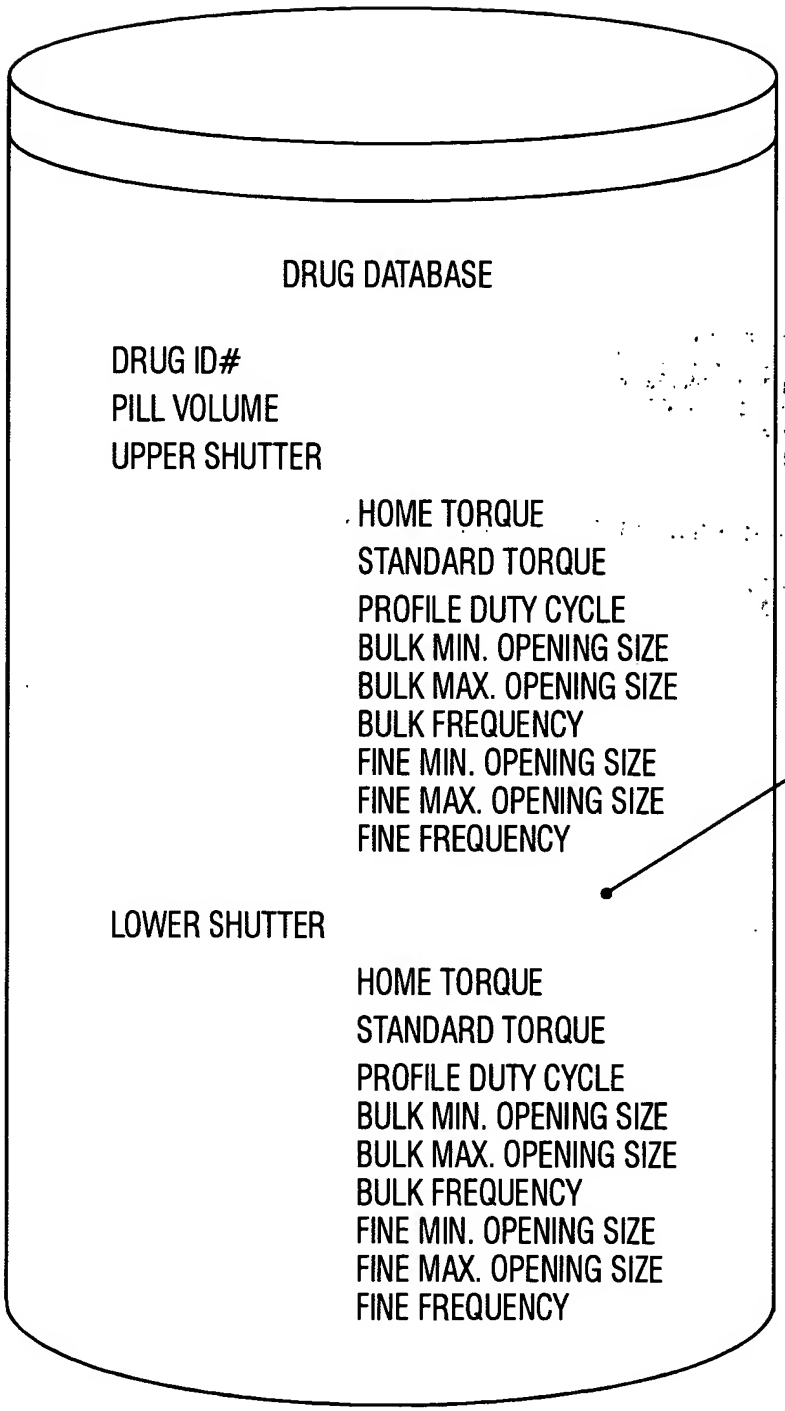

DRUG DATABASE
DRUG ID#
PILL VOLUME
UPPER SHUTTER
HOME TORQUE
STANDARD TORQUE
PROFILE DUTY CYCLE
BULK MIN. OPENING SIZE
BULK MAX. OPENING SIZE
BULK FREQUENCY
FINE MIN. OPENING SIZE
FINE MAX. OPENING SIZE
FINE FREQUENCY
LOWER SHUTTER
HOME TORQUE
STANDARD TORQUE
PROFILE DUTY CYCLE
BULK MIN. OPENING SIZE
BULK MAX. OPENING SIZE
BULK FREQUENCY
FINE MIN. OPENING SIZE
FINE MAX. OPENING SIZE
FINE FREQUENCY
WITH TESTING, MANY OF THESE VARIABLES MAY BE ELIMINATED. CONSISTENT RELATIONS BETWEEN VARIABLES FOR THE UPPER AND LOWER SHUTTERS MAY BE REALIZED.
EX: LoSh Home Torque= X * (UpSh Home Torque)
WHERE X WOULD BE THE SAME FOR EVERY PILL.

Fig.27

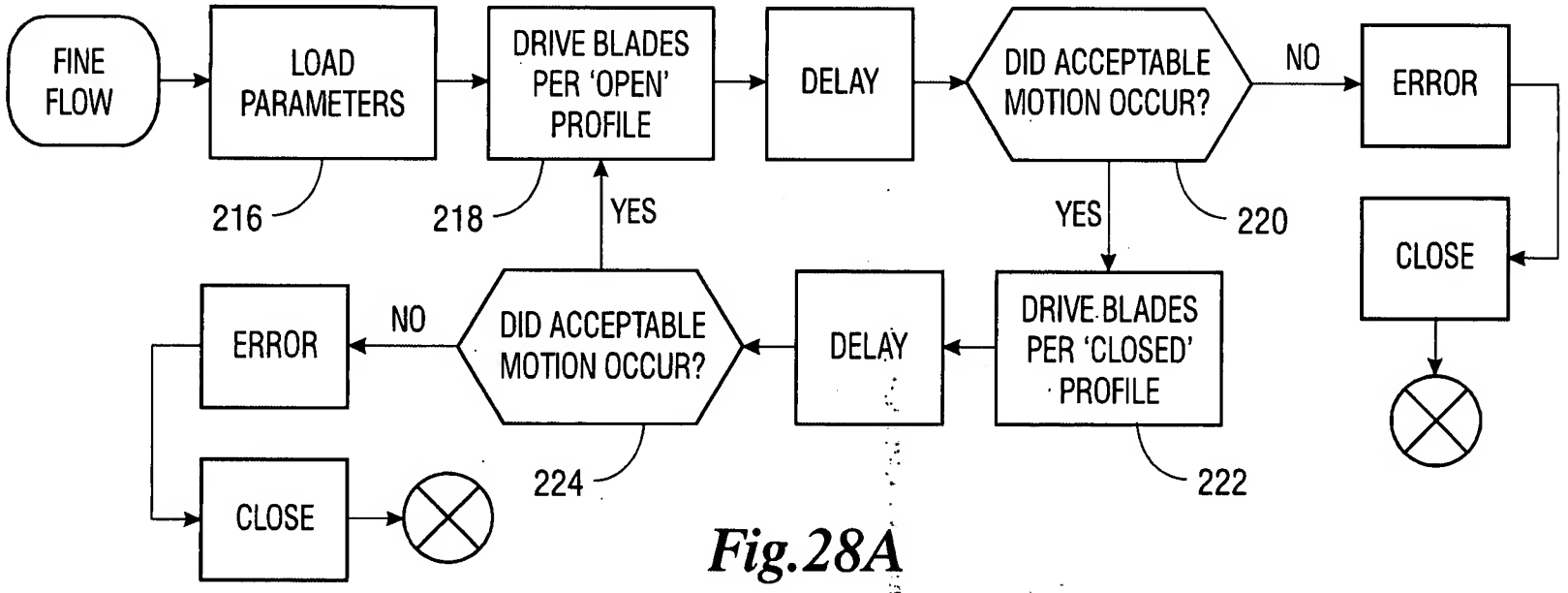


Fig.28A

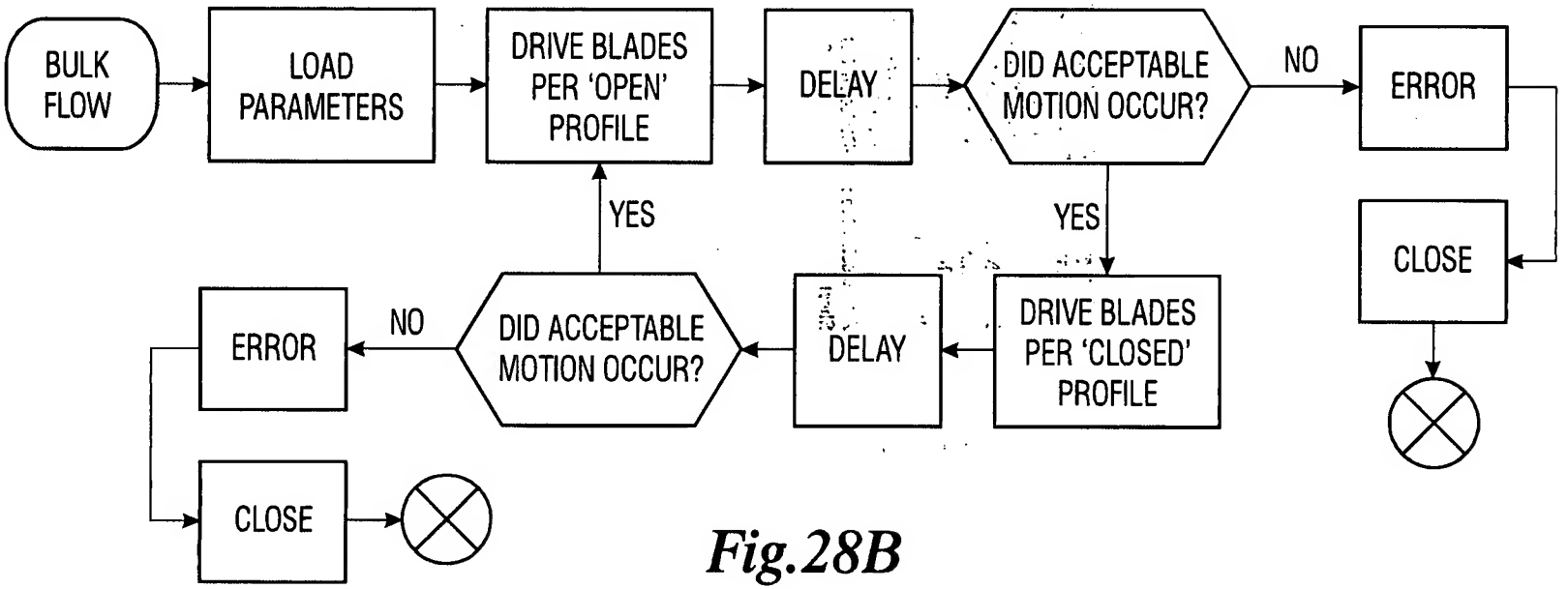


Fig.28B